Lionville Laboratory, Inc. INORGANIC ANALYTICAL DATA PACKAGE FOR ECC-LI TUNGSTEN

DATE RECEIVED: 07/0	3/07				LVL LOT # :0	707L516
CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
5601-FSS-PC-1041-1						
ARSENIC, TOTAL	001	S	07L0299	06/15/07	07/05/07	07/05/07
ARSENIC, TOTAL	001 REP	S	07L0299	06/15/07	07/05/07	07/05/07
ARSENIC, TOTAL	001 MS	S	07L0299	06/15/07	07/05/07	07/05/07
ARSENIC, TOTAL	001 MSD	S	07L0299	06/15/07	07/05/07	07/05/07
LEAD, TOTAL	001	S	07L0299	06/15/07	07/05/07	07/05/07
LEAD, TOTAL	001 REP	S	07L0299	06/15/07	07/05/07	07/05/07
LEAD, TOTAL	001 MS	S	07L0299	06/15/07	07/05/07	07/05/07
LEAD, TOTAL	001 MSD	S	07L0299	06/15/07	07/05/07	07/05/07
LAB QC:						
ARSENIC LABORATORY	LC1 BS	s	07L0299	N/A	07/05/07	07/05/07
ARSENIC, TOTAL	MB1	S	07L0299	N/A	07/05/07	07/05/07
LEAD LABORATORY	LC1 BS	S	07L0299	N/A	07/05/07	07/05/07
LEAD, TOTAL	MB1	S	07L0299	N/A	07/05/07	07/05/07



Analytical Report

Client: ECC-LI TUNGSTEN

W.O.#: 60050-010-001-9999-00

LVL#: 0707L516

Date Received: 07-03-07

METALS CASE NARRATIVE

The following is a summary of the QC results accompanying the sample results. Lionville Laboratory (LvLI) certifies that all test results meet the requirements of NELAC except as noted below.

All soil samples are reported on a dry weight basis unless requested by the client, required by the method, or noted otherwise.

- 1. This narrative covers the analysis of 1 soil sample.
- 2. The sample was prepared and analyzed in accordance with methods checked on the attached glossary.
- 3. All analyses were performed within the required holding times.
- 4. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within control limits.
- 5. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits.
- 6. All preparation/method blanks were within method criteria. Refer to the Inorganics Method Blank Data Summary.
- 7. All ICP Interference Check Standards were within control limits.
- 8. All laboratory control samples (LCS) were within the 80-120% control limits. Refer to the Inorganics Laboratory Control Standards Report.
- 9. All matrix spike (MS) and matrix spike duplicate (MSD) recoveries were within the 75-125% control limits. Refer to the Inorganics Accuracy Report.
- 10. All MSs and MSDs were within the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Matrix Spike Duplicate Report.
- 11. All duplicate analyses were within the 20% Relative Percent Difference (RPD) control limits.

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 13 pages.

Refer to the Inorganics Precision Report.

- 12. For the purposes of this report, the data has been reported to the Instrument Detection Limit (IDL). Values between the IDL and the Practical Quantitation Limit (PQL) are acquired in a region of less-certain quantification.
- 13. LvLI is NELAP accredited by the state of Pennsylvania and holds over 20 additional state accreditations. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.

Iain Daniels

Labóratory Manager

Lionville Laboratory Incorporated

jjw/m07-516

7/9/07

Date



METALS METHOD GLOSSARY

The following method Lot#: 0706 L 5/6	ods are used as refere	ence for the digestion	n and analysis	of samples	contained within this
سأمآ⊢لن شر			·		
Leaching Procedure:	:131013111	312Other:		1	
	stion and Analysis				
Matale Digestion Me	thods:3005A3	010A301530	20A <u>×</u> 3050B	3051 _	_200.7SS17
Michig Digonion 1-1	Other:				
		A. A. albusia Ma	thode		
•	M	etals Analysis Me	inous .	EPA	
		EPA	STD MTD	OSWR	USATHAMA
	SW846	200.7	010 1112	0221	99
Alum inum	_6010B				— ₉₉
Antimony	6010B7041 5 706010B7060A 5	$\frac{-200.7}{200.7}$ $\frac{-204.2}{206.2}$	3113B		— 99
Arsenic		<u></u>			— ₉₉
Bariu m	6010B	<u></u>			99
Beryllium	_6010B	200.7		1620	₉₉
Bismuth	6010B ¹		•	 "	99
Boron	6010B 7131A 5	200.7 213.2			<u>_</u> 99
Cadmium		<u></u>			99
Calcium	6010B 6010B 7191 5	200.7 218.2			SS17
Chromium	6010B7191 5 6010B	<u></u>			99
Cobalt	6010B 7211 5	200.7220.2			99
Copper	6010B/211	200.7			99
lron	√ 6010B _ 7421 ⁵	200.7 239.2	3113B		99
Lead	6010B7430 4	200.7	_	1620	99
Lithium		200.7		_	<u>99</u>
Magnesium	-6010B	200.7			99
Manganese	7470A 3_7471A 3				99
Mercury	$-^{7470A}_{6010B}$ $-^{74711}_{6010B}$	200.7			99
Molybdenum	-6010B	200.7			99
Nickel	6010B7610 4	200.7 258.1 4			99
Potassium	6010B	200.7		1620	99
Rare Earths	6010B7740 *	200.7270.2	3113B		99
Selenium	6010B '	200.7		1620	99
Silicon	6010B	200.7		1620	99
Silica	6010B7761 ⁵				99
Silver		200.7 273.1 4			99
Sodium		200.7			99
Strontium	6010B7841 ⁵	200.7 279.2	200.9		99
Thallium		200.7			99
Tin		<u></u>			99
Titanium	6010B	200.7		1620	99
Uranium	_6010B ¹	<u></u>			<u></u> 99
Vanadium	6010B	200.7			<u></u> 99
Zinc	6010B			1620	99
Zirconium	6010B ¹				
Other:	Metho	d:		1~	W1-033/M-03/01 00000000004

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

- U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.
- * = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.

MS = Matrix Spike.

MSD = Matrix Spike Duplicate.

REP = Sample Replicate

LCS = Laboratory Control Sample.

NC = Not calculated.

ANALYTICAL METAL METHODS

- 1. Not included in the method element list.
- 2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, approximately 0.3 grams of sample is taken to a final volume of 50 mL (including all reagents).
 - 3. Flame AA.
 - Graphite Furnace AA.

L-WI-033/N-04/98

INORGANICS DATA SUMMARY REPORT 07/09/07

CLIENT: ECC-LI TUNGSTEN

LVL LOT #: 0707L516

					REPORTING	DILUTION
SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	LIMIT	FACTOR
======		.======±===============================	=======	=====		***
-001	5601-FSS-PC-1041-1	Arsenic, Total	3.5	MG/KG	0.44	1.0
		Lead, Total	6.0	MG/KG	0,35	1.0

INORGANICS METHOD BLANK DATA SUMMARY PAGE 07/09/07

CLIENT: ECC-LI TUNGSTEN

LVL LOT #: 0707L516

					REPORTING	DILUTION
SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	LIMIT	FACTOR
======			======	====		
BLANK1	07L0299-MB1	Arsenic, Total	0.39 u	MG/KG	0.39	1.0
		Lead, Total	0.35	MG/KG	0.31	1.0

INORGANICS ACCURACY REPORT 07/09/07

CLIENT: ECC-LI TUNGSTEN

LVL LOT #: 0707L516

			SPIKED	INITIAL	SPIKED		DILUTION
SAMPLE	SITE ID	ANALYTE	SAMPLE	RESULT	AMOUNT	%RECOV	factor (spk)
======				======		======	=========
-001	5601-FSS-PC-1041-1	Arsenic, Total	205	3.5	214	94.1	1.0
		Arsenic, Total MSD	194	3.5	214	89.1	1.0
		Lead, Total	57.9	6.0	53.5	97.0	1.0
		Lead, Total MSD	54.6	6.0	53.5	90.8	1.0

INORGANICS DUPLICATE SPIKE REPORT 07/09/07

CLIENT: ECC-LI TUNGSTEN

LVL LOT #: 0707L516

			SPIKE#1	SPIKE#2	2
SAMPLE	SITE ID	ANALYTE	%RECOV	%RECOV	%DIFF
======			=====	=====	=====
-001	5601-FSS-PC-1041-1	Arsenic, Total	94.1	89.1	5.4
	•	Lead, Total	97.0	90.8	6.6

INORGANICS PRECISION REPORT 07/09/07

CLIENT: ECC-LI TUNGSTEN

LVL LOT #: 0707L516

			INITIAL			DILUTION
SAMPLE	SITE ID	ANALYTE	RESULT	REPLICATE	RPD	factor (RBP)
== == =		=======================================	=======	=======		***======
-001REP	5601-FSS-PC-1041-1	Arsenic, Total	3.5	3.3	5.9	1.0
		Lead, Total	6.0	6.2	3.3	1,0

INORGANICS LABORATORY CONTROL STANDARDS REPORT 07/09/07

CLIENT: ECC-LI TUNGSTEN

LVL LOT #: 0707L516

			SPIKED	SPIKED		
SAMPLE	SITE ID	ANALYTE	SAMPLE	THUOMA	UNITS	%RECOV
======	==##############	22222222222	=====		=====	=====
LCS1	07L0299-LC1	Arsenic, LCS	863	952	MG/KG	90.6
		Lead, LCS	221	238	MG/KG	92.9

X X	Relinquished by					Special Instructions:			TI Figh	WI- Wipe	L- EP/TOLP	Solids	A- 0: Dis- Dim OOI	, ,	SE- Sediment ID	MATRIX	Date Rec'd _ つ、ろ・		OC 5W846	Project Contact/Phone# Llonville Laboratory Project Manager	Project# 66 50 50	Client Exx 1 Su	01015		Lionville Laboratory Use Only
1) mid 17 307 0935	Received Date Time					Specia							5(a0) - FSS-PC .1041-1		Client ID/Description		07 Date Due 7-6-07		Del STD MI 3 days	e# roject Manager Jula J Home	6 60 50 -010 - 001 - 1999 - 00	Envisionmente OChronica OCing.	11		Custody Transfer
	Relinquished by	6.	5. 4.	ça	,2	Special Instructions:							5	MS MSD		Matrix	# 2			Vol	#/			SONNEL: CO	
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	Date												14:35		Time Collected		VOA				Solid				ab Wo
	Time															 	BNA Pest/ PCB Herb	ORGANIC						ED AREAS	ork Request
ORIGINAL REWRITTEN	Relinquished by																neib							•	quest
	Received by												×	м A1 м Рц	rto to	Lionville Laboratory Use Only	Metal Metal CN	INORG	\ \{\bar{\chi}{\chi}\}		اما	\$	A	က ရာ ရာ	Page 1 of 1
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Date	Company	Received By	Rece	Time	Date		Company			Relinquished By
				RECORD	TRANSFER	CUSTODY TRANSFER RECORD				
	Samples Containers Intact? Cooler/Container Custody Seal?	Samples Co Cooler/Con							3 Day	Phone: 610-280-3000 Request Turnaround Time: 3 Day
	Laboratory Receipt Information Cooler/Container Intact? Samples Received At Below 4 C?	Cooler/Con Samples Re	ow 4 C	Samples cooled below 4	Samples co				A 19341	Notes: Ship to: Lionville 208 Welsh Pool Rd, Exton, PA 19341
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	ad	Lead								N/A
1 glass jar		Total Arsenic, Total		Parcel C		FSS	14:35	6/15/2007	6/15/	5601 -FSS-PC-1041-1
CONTAINER(S)		TESTS	ENTIFIER	CLIENT SAMPLE IDENT	CLIENT	TYPE	TIME	DATE	DA	SAMPLE NUMBER
	•	_								Fax: (516) 665- 8531
rungsten	Phone: (614) 402 - 2020 Customer Project Name: Li Tungsten	Phone: (6'							Ś	Contact: Theodore Johnson Phone: (303) 472 - 8834
Phil O'Dwyer Road, Glen Cove,	ECC Project Manager: Phil O'Dwyer Address: 63 Herb Hill Road, Glen Cove, NY 11542	ECC Projed Address: 6						e, NY 11542	Tungsten I, Gien Cov	Customer Name: ECC – Li Tungsten Address: 63 Herb Hill Road, Glen Cove, NY 11542
	ber:	COC Number:								Phone: (303) 298-7607 Fax: (303) 298-7837
										Bldg. 21, Suite 350 Lakewood. CO 80401
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<u>,</u>								ration	al Corpor	Environmental Chemical Corporation